R E P O R T R E S U M E S

ED 016 387 EM 005 634

SOME CONSIDERATIONS IN THE EDUCATION OF INDIGENOUS GROUPS IN THE SOUTHWEST.

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REPORT NUMBER SP-2148 PUB DATE 19 JUL 65
EDRS PRICE MF-$0.25 HC-$0.72 16P.

DESCRIPTORS- *AMERICAN INDIANS, *EDUCATIONAL IMPROVEMENT, *SPANISH AMERICANS, *PROGRAMED INSTRUCTION, *CULTURAL ENVIRONMENT, ECONOMIC FACTORS

THE GENERAL SIZE AND DISTRIBUTION OF THE INDIGENOUS POPULATIONS OF THE SOUTHWESTERN UNITED STATES, INCLUDING INDIANS AND SPANISH-SPEAKING PEOPLES, ARE DISCUSSED. SELECTED RESEARCH FINDINGS REGARDING EFFORTS TO IMPROVE METHODS OF DEALING WITH THE EDUCATIONAL PROBLEMS OF THESE PEOPLE ARE PRESENTED. FINALLY, THERE IS DISCUSSION OF THE APPLICABILITY OF CERTAIN EDUCATIONAL TECHNIQUES, SUCH AS PROGRAMED INSTRUCTION. (MS)

ED0163387

SP-2148

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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SP *a professional paper*

Some Considerations in the Education of Indigenous Groups in the Southwest

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19 July 1965

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EM 005 634

A-1162 REV. 4/64

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ABSTRACT

Current interest in the educational problems of the indigenous population of the southwestern United States, including Indians and Spanish-speaking peoples, is high. This paper discusses the general size and distribution of these populations in the Southwest. In addition, selected research findings relating to efforts to develop improved methods of dealing with the educational problems of these people are presented. Finally, the applicability of certain educatory techniques, such as programmed instruction, is discussed.

SOME CONSIDERATIONS IN THE EDUCATION OF INDIGENOUS GROUPS IN THE SOUTHWEST

A. OVERVIEW

There has long been concern with projects designed to facilitate the political, economic, and educational development of indigenous cultural enclaves in the Western Hemisphere. Numerous attempts to establish self-sustaining political, economic, and educational institutions have been made.

The southwestern United States has been the scene, for several decades, of efforts to raise the socio-political position of literally hundreds of thousands of residents. No area in the United States, except the Southwest, has such a large indigenous population, much of which maintains a standard of living below that prevailing in the area in which they live.

This paper discusses the general size and distribution of the Indian and Spanish-speaking population in the Southwest. In addition, selected research findings relating to efforts to develop improved methods of dealing with the educational problems of these people are presented.

B. THE INDIAN POPULATION

There are approximately 19 Indian enclaves in the area encompassing southern California, the southern tip of Nevada, and the entire states of New Mexico and Arizona. This is an area which could be considered as being distinct, for educational research purposes, because of certain cultural commonalities.

Included in this figure are approximately 22 separate reservations, if we count as one reservation the approximately 30 scattered Mission Indian reservations in southern California.

Several of the "tribes" are located on more than one reservation site, e.g., the Apache, who are scattered among five reservations in Arizona (two) and New Mexico (three). Only two groupings, the Northern or Western Diegueno and the Yaqui, are not situated on federal lands. The former primarily occupy sectors of San Diego County and number, at most, several hundred persons. The Yaqui, numbering about 3,000 people (in the United States), occupy land held for them in trust by the federal government as political refugees from Mexico. They are not wards of the government, and as such are not under the jurisdiction of such agencies as the Bureau of Indian Affairs.

The total Indian population in the area listed above exceeds 120,000 persons, possibly reaching a total of 140,000 or more. If we included the Indian populations of all of California and Nevada, the count would run higher.

The bulk of the Indian population in the area of concern lies with only eight "tribes," who, between them, number approximately 100,000 people, or about 85 per cent of the total Indian population. The largest enclave is the Navajo with approximately 70,000 to 75,000 persons. The Apache follow with over 10,000, the Pima and Papago each have about 5,000 to 7,000, followed by the Hopi with about 4,000, the Yaqui with about 3,000, and finally the Zuni with about 2,200 and the Mohave with about 1,500 persons.

Locations of these eight predominant groups are generally remote from large urban areas. For example, the Navajo Agency (which encompasses northeastern Arizona, northwestern New Mexico, and southern Utah) lies at least 50 miles from any large population center, e.g., Flagstaff, Arizona, and over 175 miles from any very heavily-populated area, such as Phoenix.

Several exceptions are the Pima and Maricopa Indians, who together occupy reservation lands on the Salt River reservation, some 10 miles east of Phoenix. Also the Yaqui settlements of Guadalupe and Pascua are located approximately 15 and 10 miles respectively from the cities of Phoenix and Tucson, Arizona.

The various Apache reservations, the Papago reservations at Gila Bend, Sells, and San Xavier, Arizona, the Fort Mohave reservation on the Arizona-California border, and the Hopi and Zuni reservations are situated either near sparsely-settled areas or are in quite remote locations.

C. THE SPANISH-SPEAKING POPULATION

In addition to the large Indian population, there is a huge Spanish-speaking population in this area, many of whom have only recently come to the United States, but including others who have been in the Southwest for generations.

According to United States Census figures for 1950, 739,760 persons in the states of California, Arizona, and New Mexico possessed Spanish as their mother tongue. This was based on a five per cent sample of the total population in these states. In addition, the census listed some 1,137,650 persons as having Spanish surnames.

The figures may be broken down as follows:

Spanish mother tongue population	Spanish surname population
Arizona---101,880	Arizona---128,318
California---416,140	California---760,453
New Mexico---221,740	New Mexico---248,880

The disparities in the figures possibly may be due to the fact that children of Spanish-American descent have not all had Spanish as their mother tongue, in spite of their parents being native speakers of Spanish.

Percentage of native-born Spanish-surname population

Arizona---82.1
California---78.2
New Mexico---96.1

Median age of Spanish-surname population

Arizona---19.8 (26.8 over-all)
California---22.7 (26.8 over-all)
New Mexico---19.2 (24.0 over-all)

Percentage of Spanish-surname population who have completed one year or more of high school

Arizona---23.0
California---36.5
New Mexico---24.4

Counties with largest Spanish-surname population in each of the three states

Arizona---42,560 (Maricopa County)
California---287,614 (Los Angeles County)
New Mexico---43,729 (Bernanillo County)

From the above figures it will be noted that even though consistently high (82.1-96.1) percentages of the Spanish-surname population in the three states were native born, very low percentages (23.0-26.5) of the total Spanish-surname population over 25 years of age have completed one year of high school.

Also of interest is the fact that the median age of the Spanish-surname population is lower (range: 19.2-19.8 years) than the age of the over-all population (range: 24.0-26.8 years) of the states in which they reside. In addition, between the years 1940 and 1950, the population of Spanish-surname persons increased 45.8 per cent, while the over-all population increased 36.0 per cent.

Almost 38 per cent (287,614 persons) of the Spanish-surname population in California is located in Los Angeles County. Thirty-three per cent (42,560 persons) of the total Spanish-surname population in Arizona lives in Maricopa County. Finally, about 18 per cent (43,729 persons) of the Spanish-surname New Mexico population live in Bernanillo County.

A very small (1.2) percentage of the Spanish-surname population in Bernanillo County were born in Mexico, while 20.1 per cent of the Spanish-surname population in Los Angeles County were born in Mexico. Facts such as these should be taken into account when preparing large-scale educational programs to "fit" particular Spanish-surname populations.

D. SOME ONGOING RESEARCH

In dealing with groups of students as large and diverse as the various Spanish-surname and Indian populations we are concerned with, it is of utmost importance to consider each group and subgroup as an entity with distinct characteristics of its own. Though there are certain commonalities involved between such groups, such as generally low income and educational levels, attention must be focused on idiosyncratic features within the individual groups.

When engaged in the design and development of educational materials, care must be taken to tailor the learning program(s) to the student population(s) involved. The "shotgun" approach, while inappropriate to any educational project, is especially inapplicable when applied to the so-called "culturally-deprived" student. A thorough knowledge of the cultural/societal variables relevant to the student population should be gathered beforehand to help assure that the learning programs instituted will be compatible with the student's educational, economic, political, religious, and general cultural background. The nature of the population for whom educational programs are being designed must be identified and fully investigated.

It is invalid to consider all Indian students, no matter which tribal affiliation they maintain, as being "just Indians," and prepare an over-all program which purports to be adapted to "the Indian population." Similarly, it is not acceptable to lump all Spanish-speaking students together under the rubric "Mexican," or some other term, and to consider all Spanish-speaking students as having identical learning problems amenable to identical educatory techniques.

A report by the author, distributed by the VIB (Variables Influencing Behavior in Indigenous Non-Western Societies) Project, Army Medical Corps, directed by Dr. J. A. Jones, Department of Anthropology, Arizona State University, Tempe, Arizona, presents information gathered from a lengthy period of work with Mexican and Yaqui students (aged 16 to 40) in the community of Guadalupe, Arizona. This report presents an outline of one part of an educational program designed to promote proficiency in grammar and written language, in addition to reading skills. In addition, some insights into general educational problems which may arise when dealing with students of these types are offered, together with ways of attacking these problems. Among the items noted are the following:

1. Knowledge of the behavioral background of the students is critical to the proper design of the educational program. Intensive anthropological investigations were carried out on the student population prior to developing the program.

2. Care must be taken to eliminate as many aversive features of the learning environment as possible. This involves, among other things, attention to such matters as:

   a. Familiarizing students with their surroundings. In the case of the VIB program, students were taken on tours of the University, including various exhibits about the campus, in order to acquaint them with what goes on at such an institution. The idea was inculcated of the University as a lively, exciting place, which carries on useful and interesting work, in contrast to the previous experiences students had had in their educational history, which generally were of a highly aversive nature.

b. Setting up classroom procedures such that none of the students would be apprehensive about asking questions or consulting with instructors about work completed or in progress, etc. This involved such seemingly "little" things as not standing over students when they were working, not marking incorrect work with "X's," asking students questions within their range of answering ability and using the technique of successive approximation to gradually raise (depending on the student's answers) the level of difficulty of questions asked, setting up classrooms to foster competition (it was generally found that closely-related students would attempt to have their performance levels conform to a sort of arbitrary standard which even the slowest student could attain, possibly in order not to embarrass these people). Heterogeneous classes functioned often to reduce this behavior and increase the frequency of competitive behavior. There were some exceptions to this as when two brothers spent much time attempting to determine each other's progress and performance levels throughout the duration of the program. In this case putting close relatives in the same class served to increase competition (at least between the two of them), though it is possible that performance levels were lowered through excessive concern with not falling behind the other brother.

E. USE OF PROGRAMMED INSTRUCTION WITH INDIGENOUS GROUPS

A significant finding of this research is in relation to programmed instruction: the nature of PI, in which students often get a very high percentage of items correct, in which students move at their own pace and are not left behind (as they often are when members of classes composed mainly of "non-culturally-deprived" students), and in which students are not punished either in front of the entire class or in private by their teacher, functions to make PI a very reinforcing experience for many students of this background.

For perhaps the first time, students of this type began to gain confidence regarding their intellectual abilities. Interest in further avenues of education and, possibly, in gaining high school diplomas (as through the General Educational Development Test) increased greatly. Students verbalized less "inferiority" behavior and much of the aversiveness which the learning environment had acquired through years of exposure to often highly punishing educational procedures appeared to "wear off."

It is quite possible that the exact area in which programmed instruction can do the most good, both in providing input to the students and in reinforcing them for "learning" behavior, is with such "culturally-deprived" students as the Yaqui and Mexicans dealt with in the VIB Project. Detambel and Stolurow (3), Porter (8), and Ferster and Sapon (4), provide supporting statements in this regard.

In addition to using programmed instruction to provide self-pacing and allow for individualized instruction, PI could be used as a "motivator." In other words, when standard educatory techniques are failing to keep the student's performance at a high and constant level, a sequence of programmed instruction could be interspersed to provide an extra "dosage" of reinforcement for the student. Alternations between programmed and non-programmed sequences of instruction could be made to prevent satiation with any particular technique of information presentation.

APPENDIX

MAJOR INDIAN POPULATION CENTERS IN SOUTHERN CALIFORNIA, THE SOUTHERN TIP OF NEVADA, AND THE STATES OF NEW MEXICO AND ARIZONA, INCLUDING FEDERAL RESERVATIONS

	Name of Center	Location	Population
1.	Mission (Mission Indians)	About 30 reservations in southern California	Several thousand
2.	Yuma (Yuma Indians) Res.	California-Arizona border near Yuma	Several thousand
3.	Ft. Mohave (Mohave) Res.	California-Arizona border on Colorado River	About 1,500
4.	Chemehuevi Valley (Chemehuevi)	Res. South of Ft. Mohave	Over 350
5.	Colorado River (Chemehuevi & Mohave)	Res. South of Chemehuevi	About 1,000
6.	Diegueno (Diegueno) No Res.	San Diego County, Calif.	Several hundred
7.	Kaibab (Pauite) Res.	Arizona-Utah border	Several hundred
8.	Havasupai (Havasupai) Res.	75 miles south of Kaibab Res.	About 200
9.	Hualapai (Hualapai) Res.	25 miles SW of Havasupai Res.	Several hundred
10.	Yavapai (Yavapai) Res.	40 miles SW of Flagstaff, Arizona	About 50
11.	Ft. Apache (Apache) Res.	125 miles ENE of Phoenix, Arizona	About 10,000 Apache, including Center #'s 11 and 12 in Arizona
12.	San Carlos (Apache) Res.	125 miles east of Phoenix, Arizona	

	Name of Center	Location	Population
13.	Pima (Pima) Res. a. Salt River b. Gila River	10 miles east of Phoenix, Arizona 26 miles south of Phoenix, Arizona	About 7,000 on the two reservations
14.	Papago (Papago) Res. a. Gila Bend b. Sells c. San Xavier	60 miles east of Phoenix 75 miles south of Phoenix East of Tucson	About 6,000 on the three reservations
15.	Maricopa (Maricopa) Res. a. Salt River-shared with Pima b. Gila River-shared with Pima		About 500 on the two reservations
16.	Cocopah (Cocopah) Res.	Arizona near Yuma	About 300
17.	Navajo (Navajo) Res.	NE Arizona, NW New Mexico (also some in southern Utah)	About 75,000
18.	Hopi (Hopi) Res.	NE Arizona (in center of Navajo Res.)	About 4,000
19.	Zuni (Zuni) Res.	NE New Mexico (south of Eastern extension of Navajo Res.)	2,200
20.	Pueblo (Pueblo) Res. Many (over a dozen) locations	North-central New Mexico, encircling Albuquerque	Several thousand
21.	Mescallero (Apache) Res.	South-central New Mexico, 150 miles SSE of Albuquerque	Several hundred
22.	Jicarilla (Apache) Res.	NE New Mexico, about 100 miles north of Albuquerque	Several hundred
23.	Chiricahua (Apache) Res.	Southern New Mexico	Several hundred
24.	Yaqui (Yaqui) No Res. Two locations (main) a. Guadalupe b. Pascua	15 miles south of Phoenix, Arizona Several miles outside Tucson, Arizona	About 3,000 between Guadalupe, Pascua and minor locations

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DOCUMENT CONTROL DATA - R&D

1. ORIGINATING ACTIVITY (Corporate author)

System Development Corporation,
Santa Monica, California

2a. Unclassified

2b.

3. REPORT TITLE

SOME CONSIDERATIONS IN THE EDUCATION OF INDIGENOUS GROUPS IN THE SOUTHWEST.

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

5. AUTHOR(S) (Last name, first name, initial)

Berman, M. L.

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
19 July 1965	11	12

8a. CONTRACT OR GRANT NO. Not applicable

b. PROJECT NO.

c.

d.

9a. ORIGINATOR'S REPORT NUMBER(S)

SP-2148

9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)

10. AVAILABILITY/LIMITATION NOTICES

This document has been cleared for open publication and may be disseminated by the Clearing House for Federal Scientific and Technical Information.

11. SUPPLEMENTARY NOTES

12. SPONSOR

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KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Education						
Indigenous Groups						
Southwest						
Cultural						
Political						
Economics						
Programmed Instruction						